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## A Reflection: Art and Science in a Museum Gallery

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*Museum of Contemporary Art, Los Angeles, California, USA*

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### Abstract

Art education in a public space can be a venue for the blending of art and science. As a [Contemporary Art Start](#) educator for the [Museum of Contemporary Art](#) (MOCA), Los Angeles, I have experienced the many ways in which transdisciplinary education creates deeper student understanding and engagement. At MOCA we use [Visual Thinking Strategies](#) for student tours, a research-based teaching method that invites students to direct gallery discussions. We visit a few artworks for ten to fifteen minutes each to foster critical thinking and encourage students to bring personal knowledge and experience to the conversation.

### Keywords

Art, Science, STEM, STEAM, Student Reflections, Museums, MOCA

## **A Reflection: Art and Science in a Museum Gallery**

Kaileena Flores-Emnace

Art education in a public space can be a venue for the blending of art and science. As a [Contemporary Art Start](#) educator for the [Museum of Contemporary Art](#) (MOCA), Los Angeles, I have experienced the many ways in which transdisciplinary education creates deeper student understanding and engagement. At MOCA we use [Visual Thinking Strategies](#) for student tours, a research-based teaching method that invites students to direct gallery discussions. We visit a few artworks for ten to fifteen minutes each to foster critical thinking and encourage students to bring personal knowledge and experience to the conversation.

While touring MOCA's [Under the Big Black Sun](#), Fall 2011, I found Vija Celmins' work [To Fix the Image in Memory](#) a testament to how powerfully cross-disciplinary connections can be made between science and art. Celmins' sculpture, seemingly uninteresting at first, consists of identical pairs of rocks encased on a pedestal. After discussing the artist's process, choices and possible meanings of the artwork, I explain that one of each pair of rocks is real and the other the artist cast in bronze and painted to resemble its pair. Students then closely examine the rocks looking for clues to tell the rocks apart, fulfilling Celmins' intention of the act of looking by the viewer.

Celmins' choice in medium provokes conversation about nature and art that is enhanced when students have prior scientific knowledge. This was beautifully illustrated when touring a group of fourth graders currently studying minerals. The students confidently identified the real rocks using their knowledge from classroom studies of the sparkly quality of minerals, present only in the authentic rocks. My concluding prompt for the discussion was for a 'thumb vote'

rating how interesting they found Celmins' piece. I use the 'thumb vote' as a validation of their opinions and to further discussion.

A thumb down student replied, *"I don't think this artwork is very special because they are just rocks."* This was met immediately with two hands in the air from students with their thumbs up. The first student exclaimed, *"there are so many beautiful rocks and things that we just pass by and don't notice!"* The second student, stating that her comment was a follow-up to the previous, passionately stated, *"the rocks remind me of geodes. Geodes have beautiful crystals inside of them that you would never know about unless you opened them!"*

The students' had independently arrived at a profound interpretation of the artwork in finding beauty in the mundane. Through the application of science, these students discovered the particular intrinsic value within Celmins' piece in the act of looking. Perhaps they returned to the classroom inspired by art to study science. Perhaps they returned to their classroom searching for inspiration to create art in other disciplines. Or perhaps, simply, they returned to school as engaged students. Nonetheless, this group of fourth graders provided me a meaningful encounter with art and science in demonstrating how transdisciplinary connections help us experience life as learners who are both scientists and artists.

**Kaileena Flores-Emnace** is a visual arts educator and works as a museum educator at the Museum of Contemporary Art, Los Angeles County Museum of Art and the Skirball Cultural Center. She serves on the Board of Museum Educators of Southern California and on the Blueprint for Creative Schools Task Force, appointed by the California State Superintendent. Kai is expected to graduate with her M.A. in Arts Management from Claremont Graduate University in May 2013.